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Subject: Environmental Defense comments on 2-Propenoic Acid, Isodecyl Ester (CAS# 1330-61-6)

(Submitted via Internet 7/14/04 to oppt.ncic@epa.gov, hpv.chemrtk@epa.gov, boswell.karen@epa.gov, chem.rtk@epa.gov, lucierg@msn.com and anne_lehuray@americanchemistry.com)

Environmental Defense appreciates this opportunity to submit comments on the robust summary/test plan for 2-Propenoic Acid, Isodecyl Ester (CAS# 1330-61-6).

The test plan and robust summaries for 2-propenoic acid, isodecyl ester, also called isodecyl acrylate (IDA), were submitted by the American Chemistry Council's Acrylates and Methacrylates Panel. The submission is informative and well-written, and it also includes the OECD's initial assessment of SIDS endpoints.

IDA is manufactured as an intermediate used for the synthesis of acrylic polymers. According to the test plan, applications include wood and vinyl floor coatings, pressure sensitive adhesives, paper coatings, optical coatings and screen inks. The test plan states that worker exposures are minimized by proper industrial hygiene practices and that consumer exposure is not anticipated, although the test plan indicates that consumer products could contain as much as 0.1% IDA. No information is provided on air and water releases, although some data are provided for isooctyl acrylate (IOA), a structural analog of IDA. Do both IOA and IDA have the same applications and production volume/use patterns?

The test plan contends that existing data are adequate for all SIDS endpoints. This contention is largely based on the use of surrogate data from studies of IOA, as no experimental data are available on any of the mammalian or ecotoxicity endpoints for IDA. IDA differs from IOA only in the length of the alkyl chain and the functional groups of both chemicals are the same, so the chemicals should exert a similar pattern of toxicity, although IDA is less water soluble than IOA. Although we agree that use of the IOA data is likely acceptable, we recommend that additional information scientific data be provided to justify the use of IOA as a surrogate. In particular, we ask for comparative metabolism and biodegradation data on IOA and IDA. Are the same products formed in the environment and in rodent and/or cell systems at similar rates? Given the dearth of data on IDA, such information is essential for final conclusions on the adequacy of the use of surrogate data. In general, metabolism and/or gene expression data are necessary for evaluating surrogate data for chemicals covered under the HPV program.

The combined repeat dose/reproductive/developmental toxicity study on IOA used dermal applications. The test plan states that this is the most relevant route of exposure; however the test plan also indicates that some air emissions might occur and an occupational air standard has been established by ACGIH. The sponsor needs to provide data on dermal

absorption and pharmacokinetics of IDA/IOA to strengthen the claim that the dermal route of exposure is, in fact, the most relevant.

Other comments are as follows:

1. The robust summaries contain data for the three ecotoxicity endpoints using IOA as the test substance, and the test plan indicates that ECOSAR has been used to estimate these toxicities for IDA. However, the robust summaries do not specify that the ECOSAR data is for IDA. We assume that this to be the case because the values match those in the test plan, but this needs to be clarified in the revised submission.

2. The test plan states that the mouse lymphoma assay was negative for IOA. However, the robust summaries state that three IOA concentrations caused a doubling of mutant frequencies, but that this result was within experimental error. The revised submission should include sufficient information to allow an independent assessment of the results.

Thank you for this opportunity to comment.

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